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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,495	09/24/2001	Hiroyuki Amishiro	50090-338	5812

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EXAMINER

HOGANS, DAVID L

ART UNIT	PAPER NUMBER
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2813

DATE MAILED: 04/09/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,495

Applicant(s)

AMISHIRO ET AL.

Examiner

David L. Hogans

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 21 is/are pending in the application.
- 4a) Of the above claim(s) 14-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 5-10, 12 and 21 is/are allowed.
- 6) ☒ Claim(s) 1-4, 11 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to the Request for Continued Examination filed on January 21, 2003.

Status of Claims

Claims 1-13 and 21 are pending. Claims 14-20 are withdrawn.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US2002/0033519 to Babcock et al.

Claim 1

Babcock et al., in paragraphs 0022-0024 and Figures 5A-5F, teaches: heating elements (75) that act as resistors on an insulating film (20) in predetermined regions and active regions (80) adjacent to the resistor element that partition the insulating film.

Babcock et al. discloses the claimed invention except wherein the active regions partition the insulating film between adjacent resistor elements.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to place another active region/resistor element combination adjacent the previous active region/resistor element combination, since it has been held that mere duplication of the essential working parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669 (CCPA 1960)

Claim 2

Incorporating all arguments of Claim 1 and noting that Babcock et al., in paragraphs 0022-0024 and Figures 5A-5F, teaches an insulating film (20). The Examiner notes that the patentability of a product does not depend on its method of production. Therefore, the limitation that the insulating film is formed by shallow trench isolation carries no patentable weight.

"Even though product -by[-] process claims are limited by and defined by the process, determination of patentability is based upon the product itself. The patentability of a product does not depend on its method of production. If the product in product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product is made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985)(citations omitted).

A "*product by process*" claim is directed to the product per se, no matter how actually made, *In re Hirao and Sato et al.*, 190 USPQ 15 at 17 (CCPA 1976) (footnote 3). See also *In re Brown and Saffer*, 173 USPQ 685 (CCPA 1972); *In re Luck and Gainer*, 177 USPQ 523 (CCPA 1973); *In re Fessmann*, 180 USPQ 324 (CCPA 1974); and *In re Marosi et al.*, 218 USPQ 289 (CAFC 1983) final product per se which must be determined in a "*product by, all of*" claim, and not the patentability of the process, and that an old or obvious product, whether claimed in "*product by process*" claims or not. Note that Applicant has the burden of proof in such cases, as the above caselaw makes clear.

Claim 3

Incorporating all arguments of Claim 1 and noting that Babcock et al., in paragraphs 0022-0024 and Figures 5A-5F, teaches wherein said insulating film (20) is set to a predetermined width by said active regions (80).

Claim 11

Incorporating all arguments of Claim 1 and noting that Babcock et al., in paragraphs 0022-0024 and Figures 5A-5F, teaches wherein said active regions (80) extend close to lengthwise ends of said resistor elements (75).

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US2002/0033519 to Babcock et al. in view of Microchip Fabrication (2000) to Van Zant.

Babcock et al., in paragraphs 0022-0024 and Figures 5A-5F, teaches: resistor elements (75) formed on an insulating film (20) in predetermined regions, active regions (80) proximate to said resistor elements and said insulating film set to a predetermined width by said active regions.

Babcock et al. fails to explicitly teach wherein said predetermined width is defined by an amount of shift in resistance value of said resistor elements.

However, Van Zant, on pages 30-31, teaches that a resistors resistance varies inversely with the width of the resistor. Therefore, the Examiner deems this limitation (i.e. - wherein said predetermined width is defined by an amount of shift in resistance value of said resistor elements) as obvious to one having ordinary skill in the art.

It would have been obvious to one having ordinary skill in the art to modify Babcock et al. by incorporating the principle where a resistors resistance varies inversely with the width of the resistor, as taught by Van Zant, because this scientific principle is well known within the art.

4. Claims 1-3, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over 4,326,213 to Shirai et al.

Claim 1

Shirai et al., in Figures 1-3 and 5-10, teaches: a resistor element (R1) on an insulating film (20) in predetermined regions and active regions (Q3) adjacent to the resistor element that partition the insulating film.

Shirai et al. discloses the claimed invention except wherein the active regions partition the insulating film between adjacent resistor elements.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to place another active region/resistor element combination adjacent the previous active region/resistor element combination, since it has been held that mere duplication of the essential working parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669 (CCPA 1960)

Claim 2

Incorporating all arguments of Claim 1 and noting that Shirai et al., in Figures 1-3 and 5-10 teaches an insulating film (20). The Examiner notes that the patentability of a product does not depend on its method of production. Therefore, the limitation that the insulating film is formed by shallow trench isolation carries no patentable weight.

"Even though product -by[-] process claims are limited by and defined by the process, determination of patentability is based upon the product itself. The patentability of a product does not depend on its method of production. If the product in product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product is made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985)(citations omitted).

A "*product by process*" claim is directed to the product per se, no matter how actually made, *In re Hirao and Sato et al.*, 190 USPQ 15 at 17 (CCPA 1976) (footnote 3). See also *In re Brown and Saffer*, 173 USPQ 685 (CCPA 1972); *In re Luck and Gainer*, 177 USPQ 523 (CCPA 1973); *In re Fessmann*, 180 USPQ 324 (CCPA 1974); and *In re Marosi et al.*, 218 USPQ 289 (CAFC 1983) final product per se which must be determined in a "*product by, all of*" claim, and not the patentability of the process, and that an old or obvious product, whether claimed in "*product by process*" claims or not. Note that Applicant has the burden of proof in such cases, as the above caselaw makes clear.

Claim 3

Incorporating all arguments of Claim 1 and noting that Shirai et al., in Figures 1-3 and 5-10, teaches wherein said insulating film (20) is set to a predetermined width by said active regions (Q3).

Claim 11

Incorporating all arguments of Claim 1 and noting that Shirai et al., in Figures 1-3 and 5-10, teaches wherein said active regions (Q3) extend close to lengthwise ends of said resistor elements (R1).

Claim 13

Incorporating all arguments of Claim 1 and noting that Shirai et al., in Figures 1-3 and 5-10, teaches wherein said resistor elements (R1) are formed by a layer constituting gate electrodes of MOS transistors outside said predetermined regions.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over 4,326,213 to Shirai et al. in view of Microchip Fabrication (2000) to Van Zant.

Shirai et al., in Figures 1-3 and 5-10, teaches: a resistor (R1) formed on an insulating film (20) in predetermined regions, active regions (Q3) proximate to said resistor elements and said insulating film set to a predetermined width by said active regions.

Shirai et al. fails to explicitly teach wherein said predetermined width is defined by an amount of shift in resistance value of said resistor elements.

However, Van Zant, on pages 30-31, teaches that a resistors resistance varies inversely with the width of the resistor. Therefore, the Examiner deems this limitation (i.e. - wherein said predetermined width is defined by an amount of shift in resistance value of said resistor elements) as obvious to one having ordinary skill in the art.

It would have been obvious to one having ordinary skill in the art to modify Shirai et al. by incorporating the principle where a resistors resistance varies inversely with the width of the resistor, as taught by Van Zant, because this scientific principle is well known within the art.

Response to Arguments

6. Applicant's arguments with respect to claims 1-3, 11 and 13 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

7. Claims 5-10, 12 and 21 are allowed.

The following is a statement of reasons for the indication of allowable subject matter.

The prior art of record fails to teach Applicant's claimed device of a plurality of resistor elements formed on an insulating film in predetermined regions, active regions proximate to each of said resistors, wherein the regions including said active regions are furnished with dummy gate electrodes constituting the same layer as that of said resistor elements.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5,589,708 to Kalnitsky teaches resistor elements formed on an insulating film in predetermined regions wherein active regions proximate to said resistor elements partition said insulating film between adjacent resistors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Hogans whose telephone number is (703) 305-3361. The examiner can normally be reached on M-F (7:30-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on (703) 308-4940. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

dh *DA*
April 1, 2003

Carl Whitehead Jr.
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